AP900C service tool

Installer and user manual

TOTAL SECURITY SYSTEMS tss GROUP

1.01

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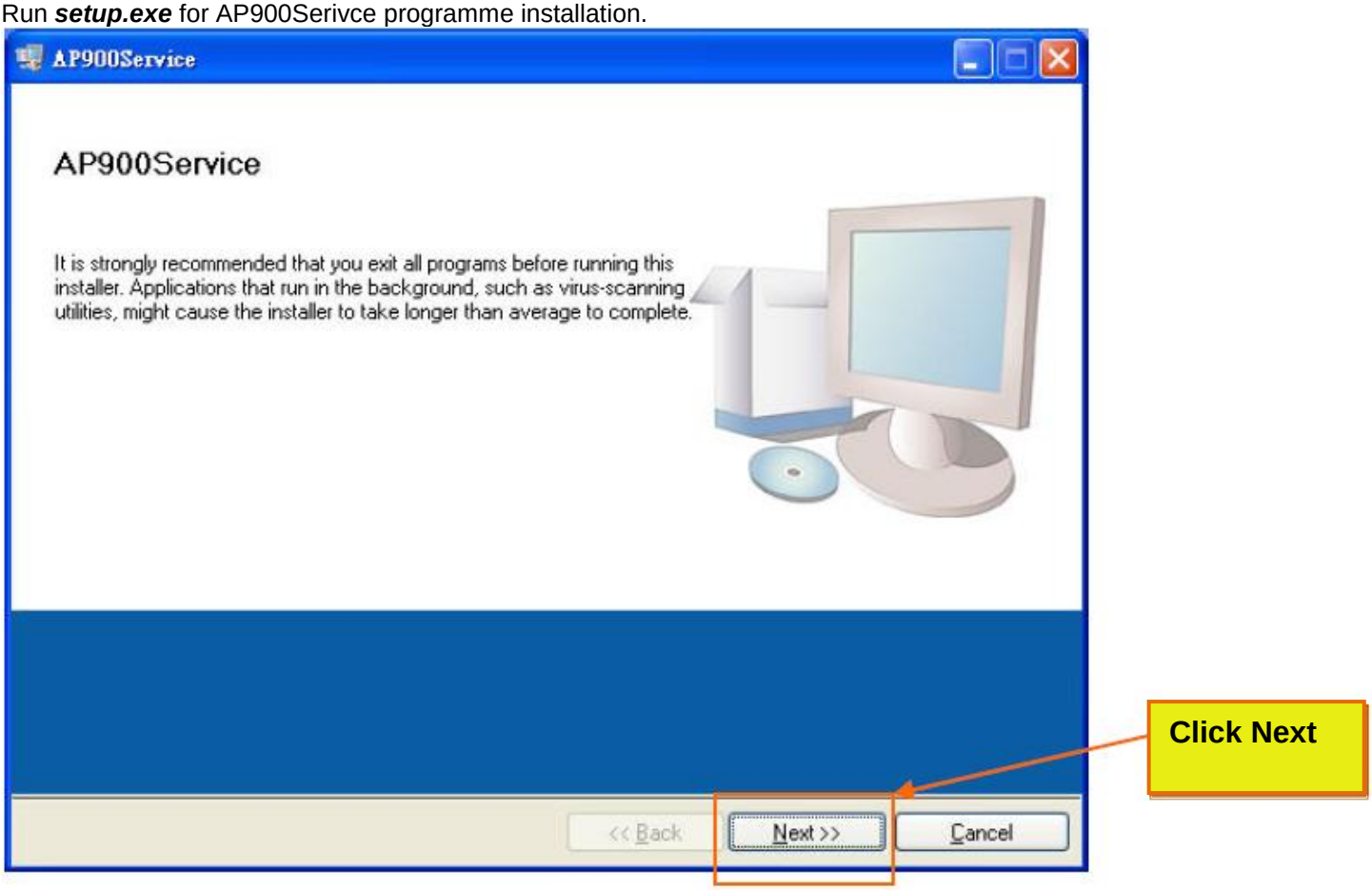
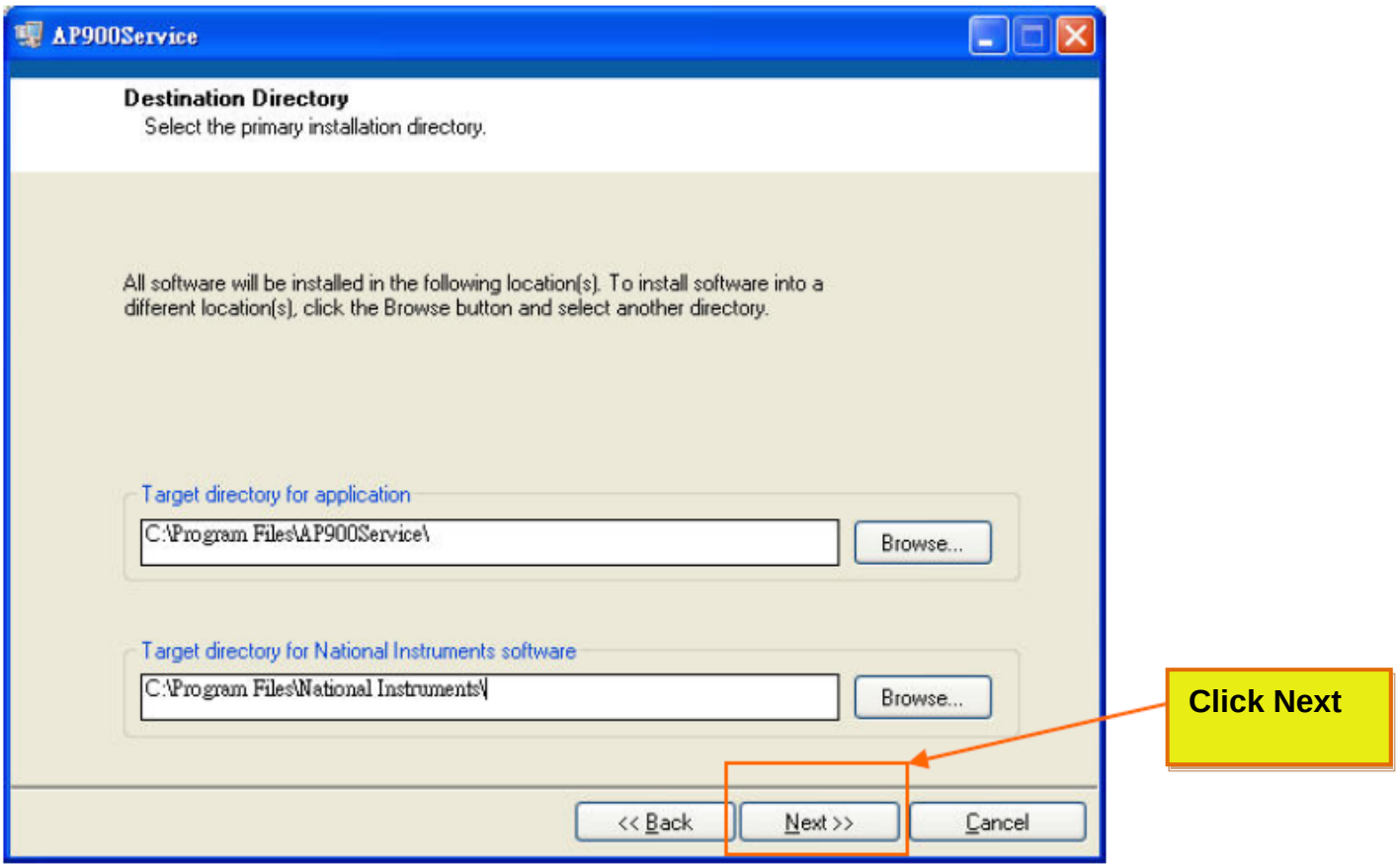
Installation

Run ***setup.exe*** for AP900Serivce programme installation.

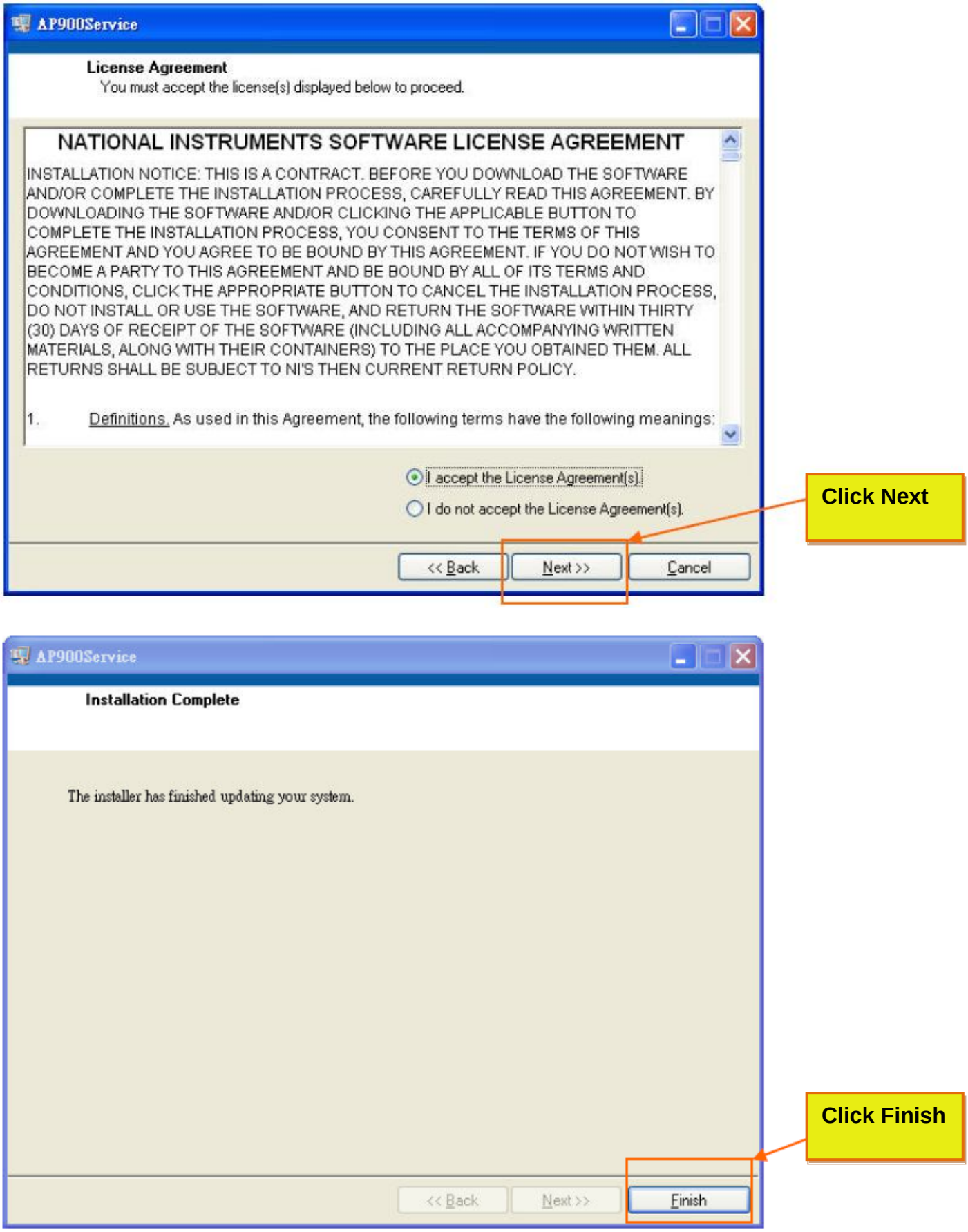

AP900Service
AP900Service
It is strongly recommended that you exit all programs before running this installer. Applications that run in the background, such as virus-scanning utilities, might cause the installer to take longer than average to complete.
<< Back
Next >>
Cancel
Click Next

Picture 1- Installation


AP900Service
Destination Directory
Select the primary installation directory.
All software will be installed in the following location(s). To install software into a different location(s), click the Browse button and select another directory.
Target directory for application
C:\Program Files\AP900Service\
Browse...
Target directory for National Instruments software
C:\Program Files\National Instruments\
Browse...
<< Back
Next >>
Cancel
Click Next

Picture 2- Place for installation programme

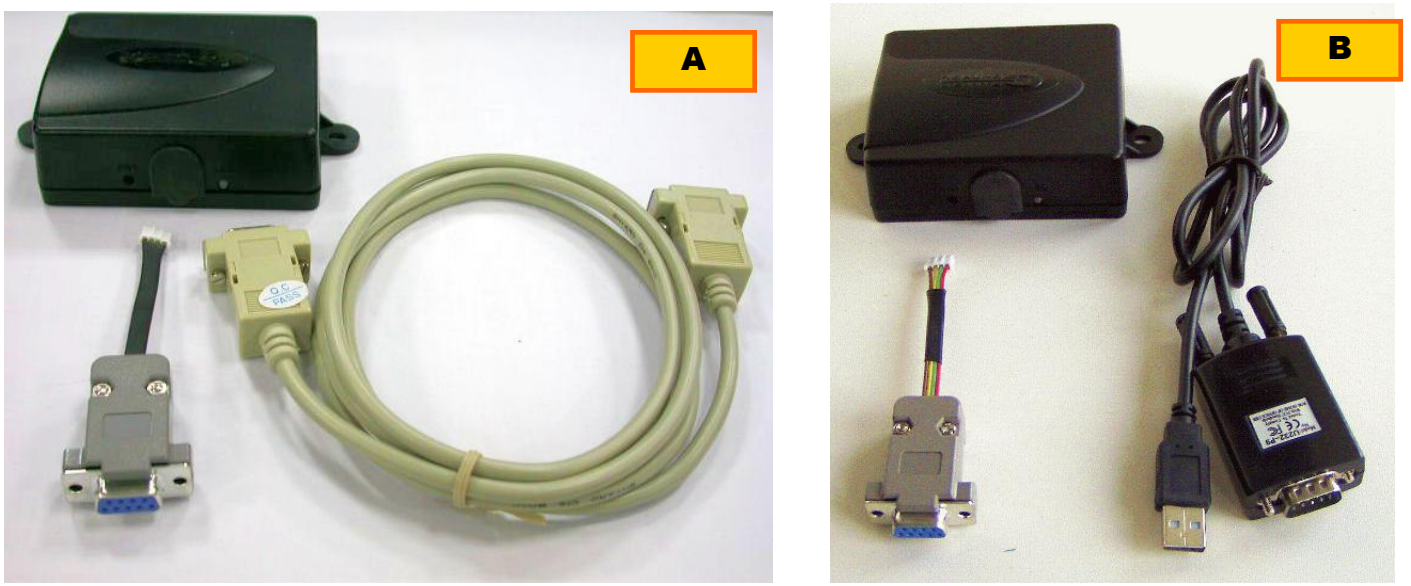
Picture 3- Licence conditions


AP900Service
License Agreement
You must accept the license(s) displayed below to proceed.
NATIONAL INSTRUMENTS SOFTWARE LICENSE AGREEMENT
INSTALLATION NOTICE: THIS IS A CONTRACT. BEFORE YOU DOWNLOAD THE SOFTWARE AND/OR COMPLETE THE INSTALLATION PROCESS, CAREFULLY READ THIS AGREEMENT. BY DOWNLOADING THE SOFTWARE AND/OR CLICKING THE APPLICABLE BUTTON TO COMPLETE THE INSTALLATION PROCESS, YOU CONSENT TO THE TERMS OF THIS AGREEMENT AND YOU AGREE TO BE BOUND BY THIS AGREEMENT. IF YOU DO NOT WISH TO BECOME A PARTY TO THIS AGREEMENT AND BE BOUND BY ALL OF ITS TERMS AND CONDITIONS, CLICK THE APPROPRIATE BUTTON TO CANCEL THE INSTALLATION PROCESS, DO NOT INSTALL OR USE THE SOFTWARE, AND RETURN THE SOFTWARE WITHIN THIRTY (30) DAYS OF RECEIPT OF THE SOFTWARE (INCLUDING ALL ACCOMPANYING WRITTEN MATERIALS, ALONG WITH THEIR CONTAINERS) TO THE PLACE YOU OBTAINED THEM. ALL RETURNS SHALL BE SUBJECT TO NI'S THEN CURRENT RETURN POLICY.
1. Definitions. As used in this Agreement, the following terms have the following meanings:
I accept the License Agreement(s).
I do not accept the License Agreement(s).
<< Back
Next >>
Cancel
Click Next
AP900Service
Installation Complete
The installer has finished updating your system.
<< Back
Next >>
Finish
Click Finish

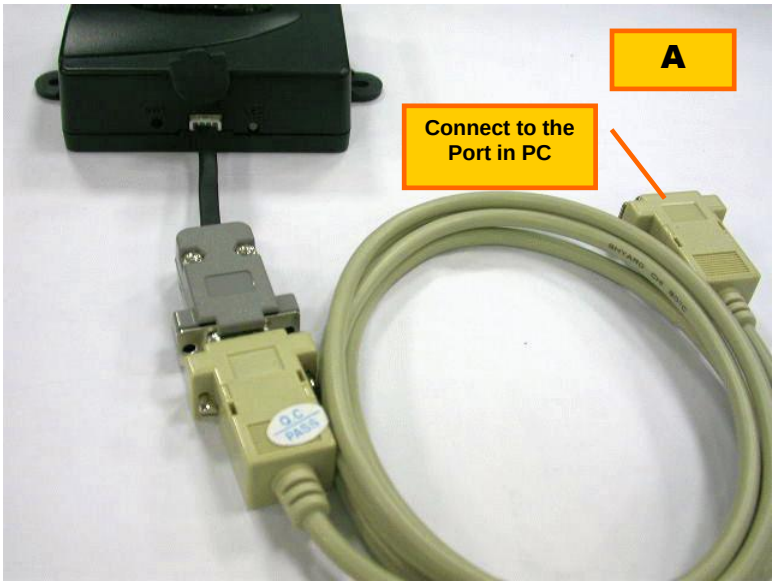
Picture 4- Installation finish

Connection cruise control with service tool

Cruise control is equipped with a special connector, located on the back of the control unit under a rubber flap.
Service wiring is equipped with Canon-9 connector for connection to PC. It is possible to use COM port (picture A), or adapter cable USB to serial port (figure B), depends on PC.



Picture 6. Needed components



Picture 7. Service wire and cruise cotnrol connection

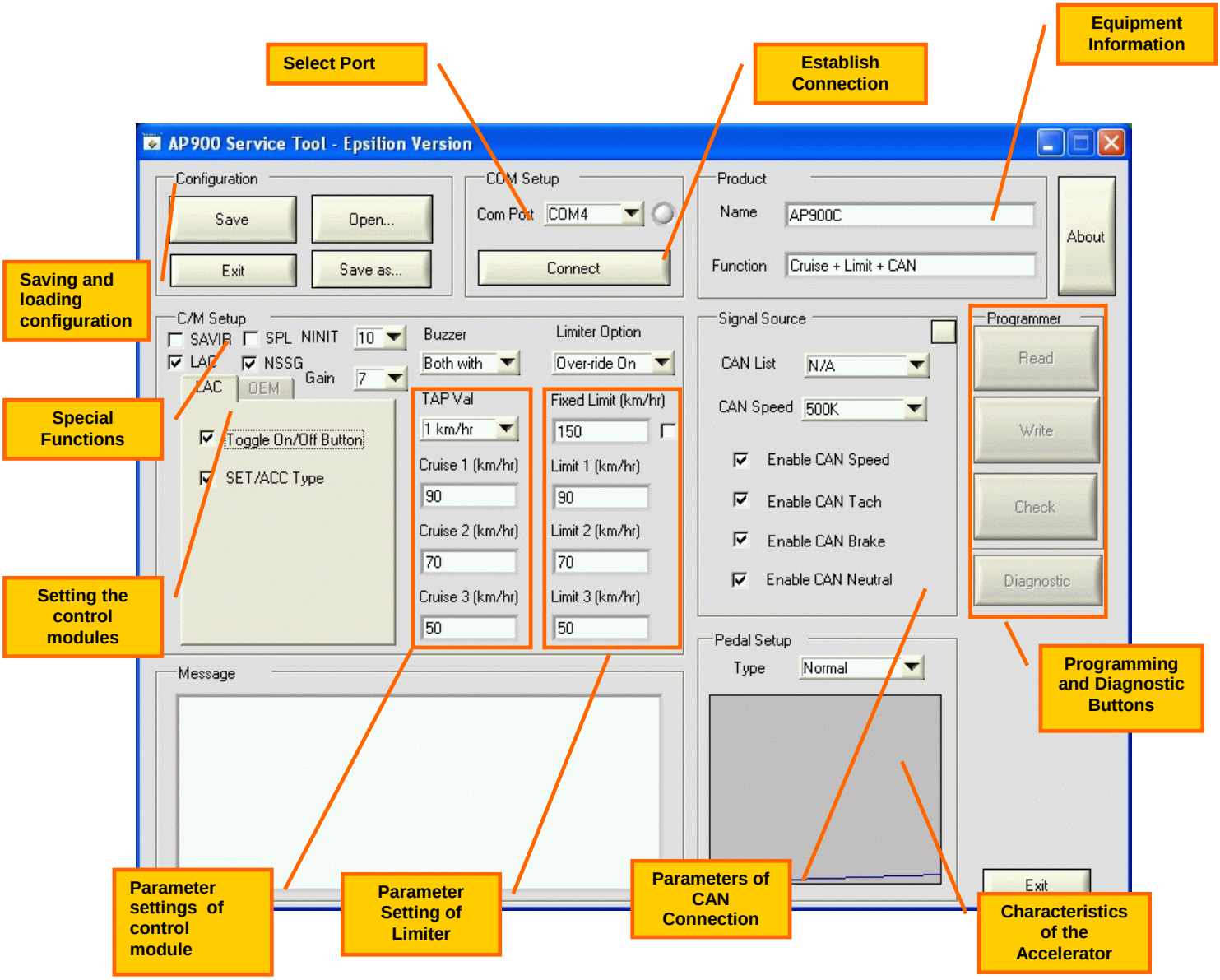
Note:
Electronic module AP900 must by connected to power supply (Ignition must by at ON)

AP900Service

Service programme allows wide sets of cruise control, the control module. It is also possible diagnosis the cruise control settings and monitor the correct responses when driving. All set parameters can be saved to a file and also read allready prepared parameters and write them to cruise control unit. For avilability of files for vehicles, contact your distributor.

Description and settings.

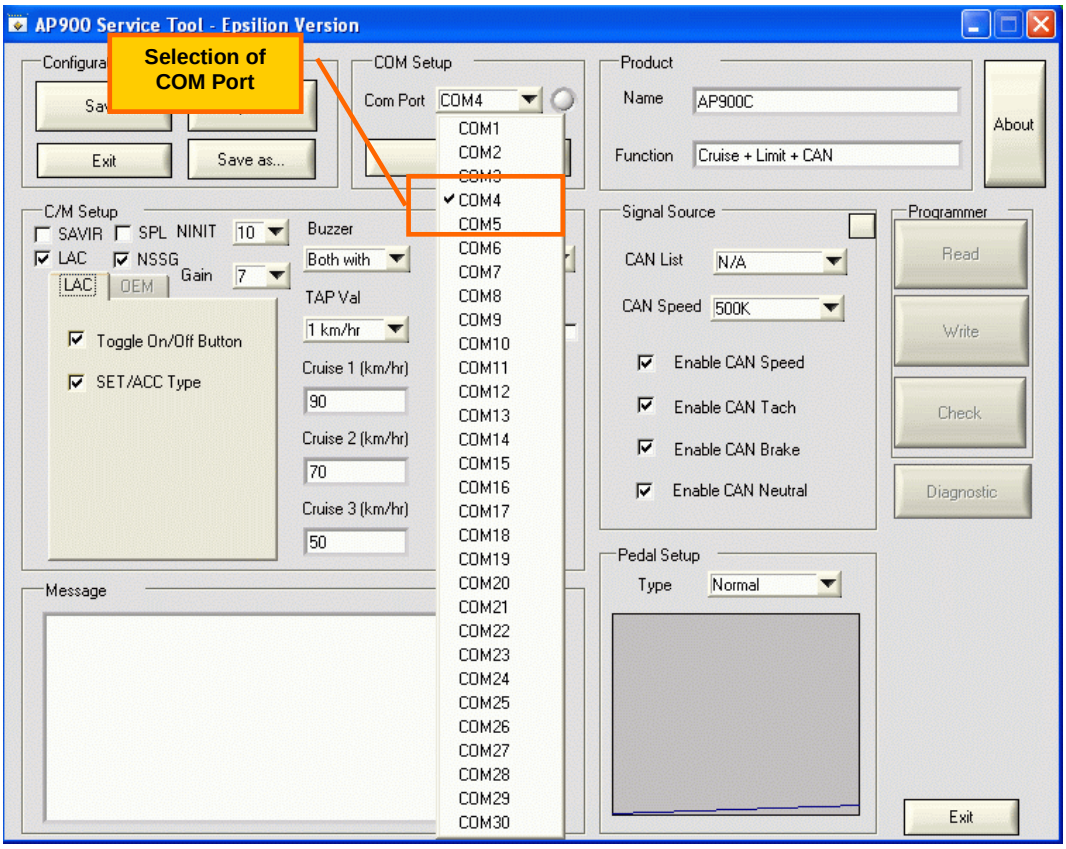
1.1. **Port selection –** to select the serial port to communicate with a service harness
1.2. **Connection –** button to start the communication with the cruise control
1.3. **Product informations –** shows basic informations about cruise control and available functions
1.4. **Saving and loading configurations** – to open and save configuration files
1.5. **Special functions –** switching ON and OFF the cruise control functions
1.6. **Setting the control modules –** choice of type and configuration control module (CM 35, CM 7, etc.)
1.7. **Setting the parameters of the control module –** choice of control module parameters function
1.8. **Limiter setting –** speed limiter parameters choice
1.9. **CAN connection –** it is possible to change CAN BUS communication speed and set the accepted inputs accessible via CAN (however, cruise control set automatically this information, when CAN mode procedure is set up. (see installer manual, chapter 6)
1.10. **Accelerator characteristics –** accelerator movement scanning and type of accelerators
1.11. **Programming and diagnostic keys –** program, verify and read configuration data as well as cruise control entry into a diagnostic mode.



Picture 5. Basic screen sevice program

Programming

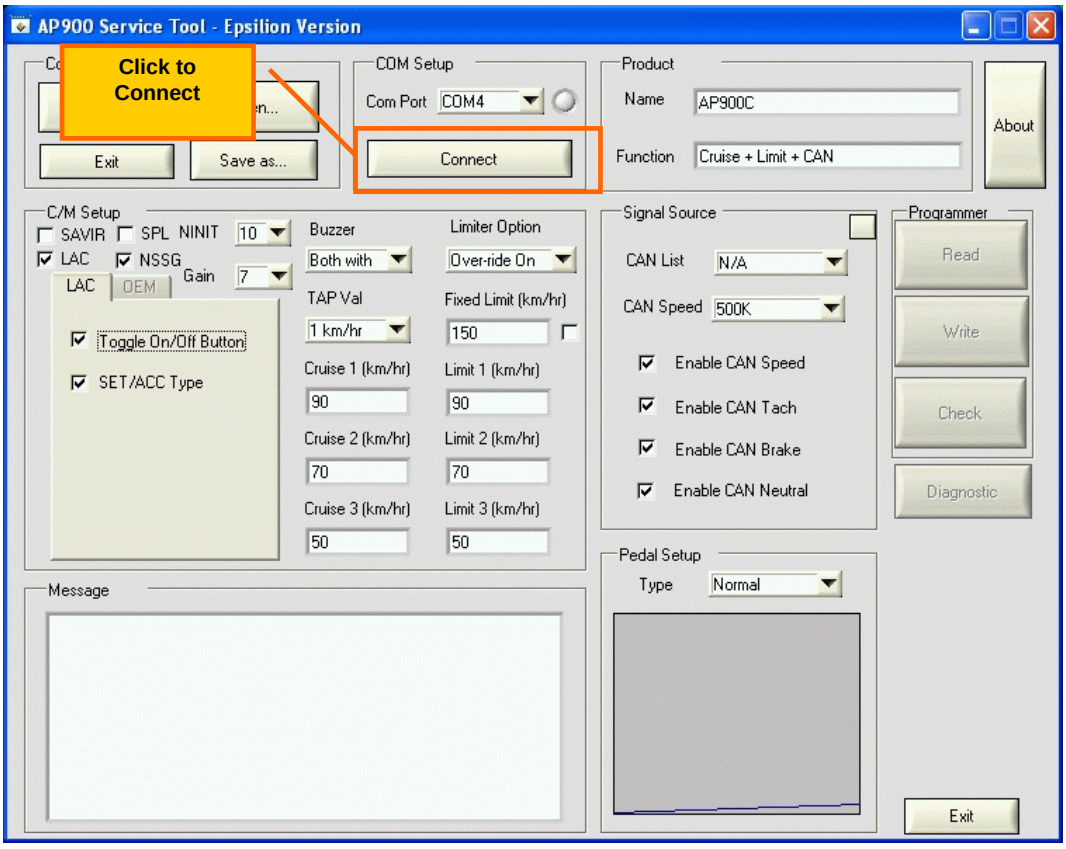
Run *AP900Service.exe* v “C:\Program Files\AP900Service\AP900Service.exe”.
Select COM port which the service harness is logged on. (COM port is displayed in Windows device manager).



Picture 8. COM port selection

Click on ***Connect*** to open COM port.

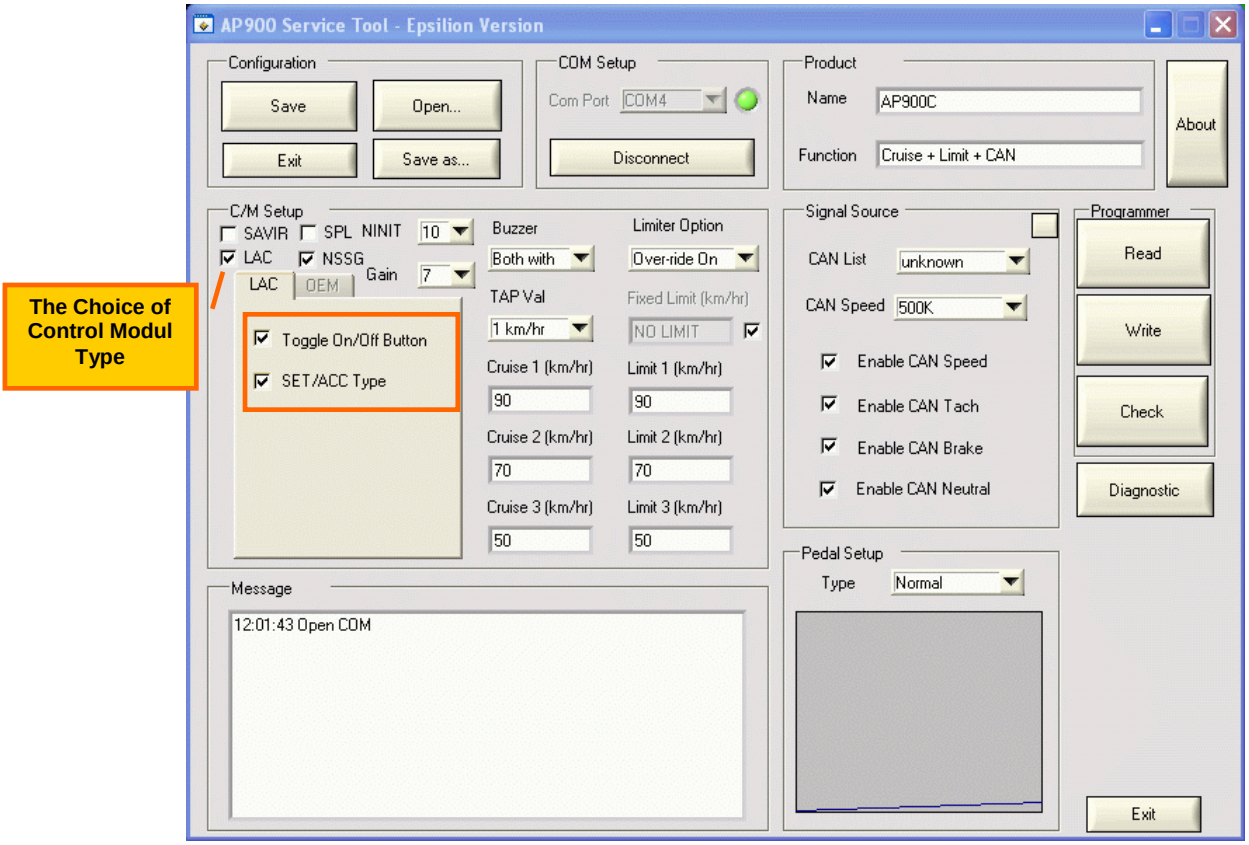
AP900 configuration will automatically load when click on ***Connect.***



Picture 9. Connect button

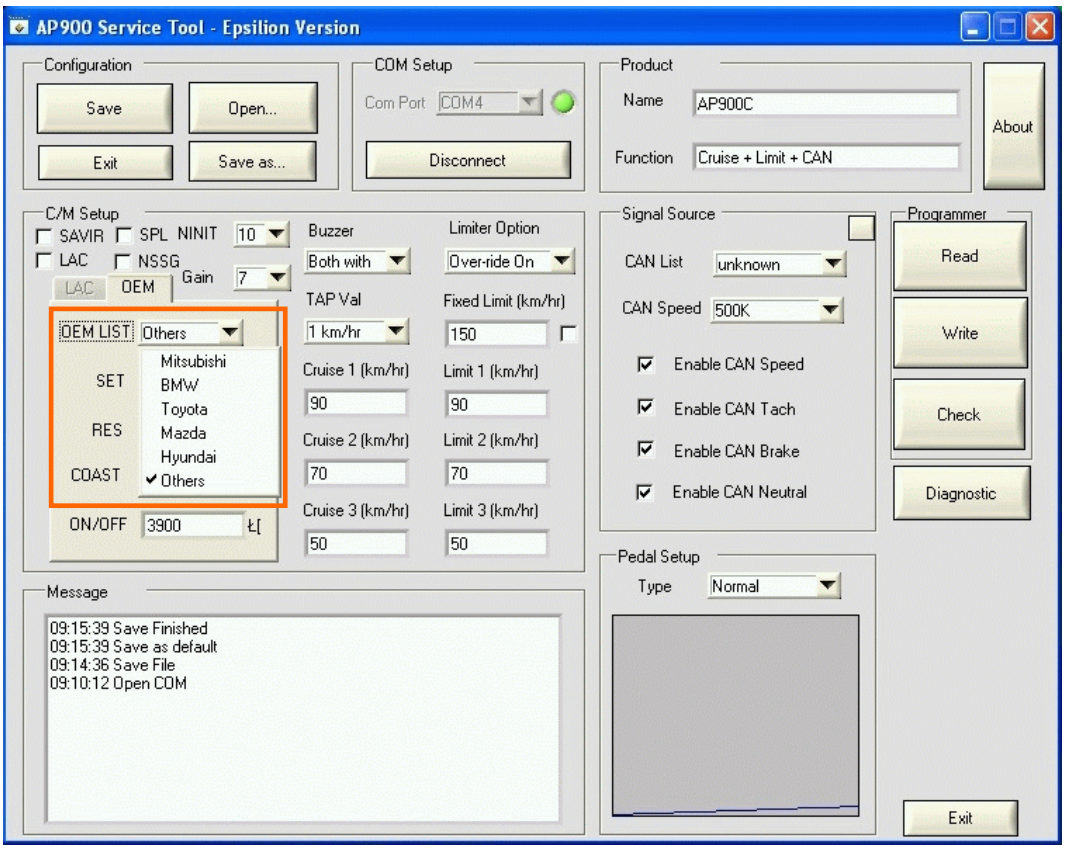
Control module types

Tick **LAC Type** when AP900 is working with one of control modules (e.g. CM7, CM35 etc.)
Toggle On/Off – if is ticked, cruise control is ON only if button ON is pressed (do not use with CM35)
SET/ACC Type – functions SET/ACC and RES/DEC rotation. When SET/ACC not ticked – decelerating and RES/DEC accelerating.
If AP900 works with OEM module, tick **LAC Type**. OEM will activate.



Picture 11. Cruise control type and function setting

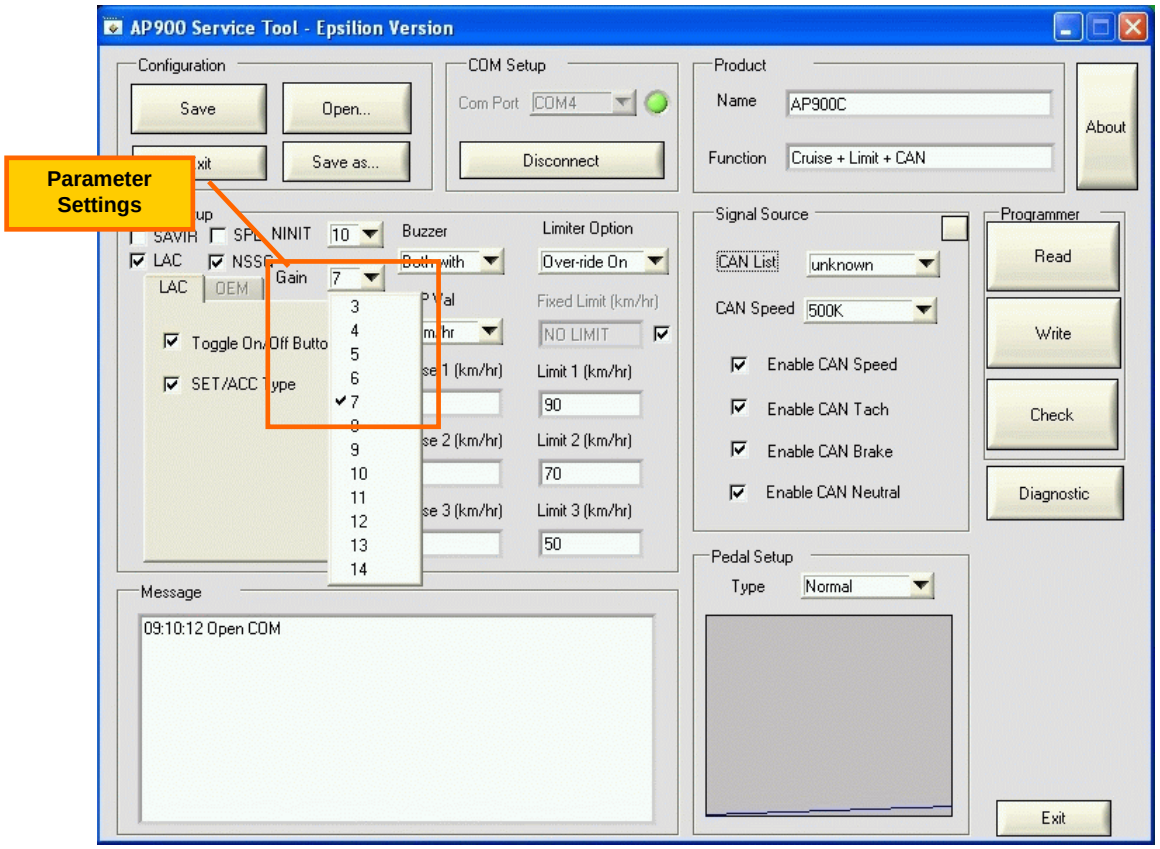
When OEM is active, there is possible to select inbuilt control of cruise control for each vehicle brand. It is also possible to set individual parameters for unknown OEM control module(*Others*). Values represents teh values of connected resistors (see chapter 5.8 in the installation manual)



Picture 12. OEM set up

GAIN set up

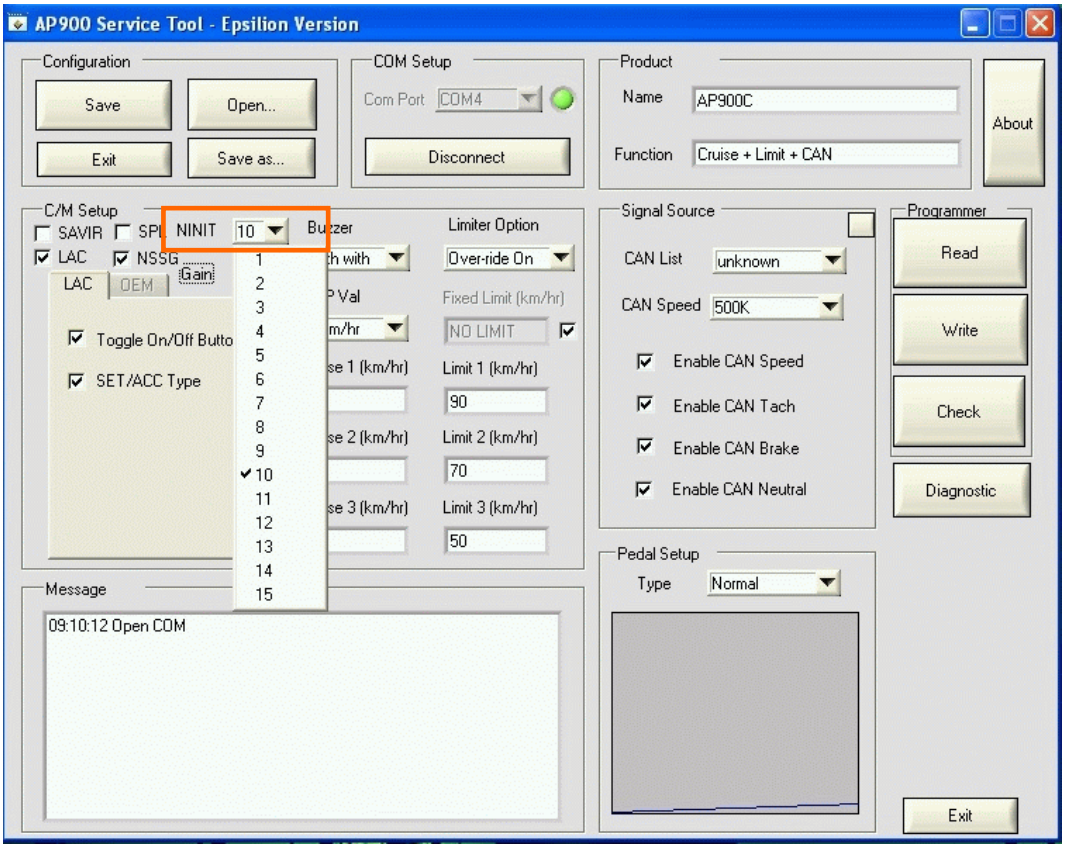
It can set the value of the gas gain sensitivity. This value should be carefully selected. We recommnend after each change to check vehicle reactions. The higher the increment of gas, the faster the acceleration of the vehicle. (excessive RPM increase)



Picture 12 GAIN set up

INIT set up

It is possible to set or change the INIT parameter value.(reaction time to press the SET button) Increasing the parameter has the effect of faster reaction of vehicle speed.

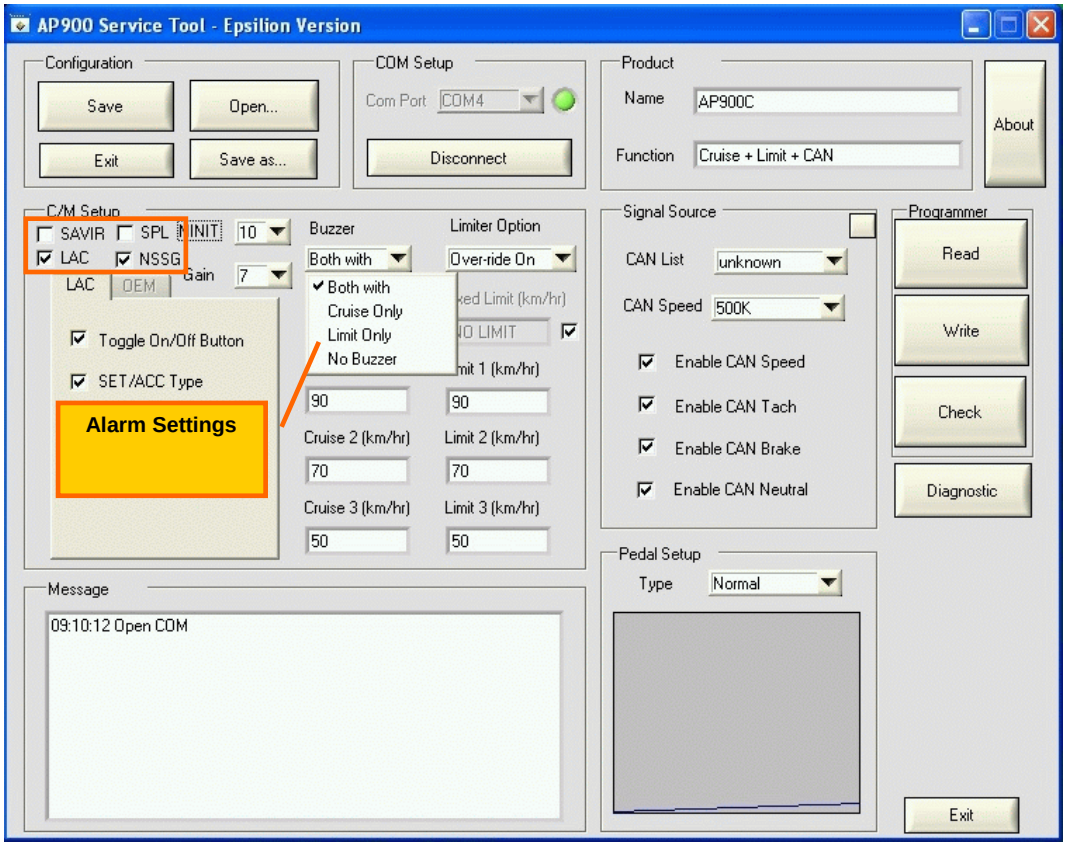


Picture 13. INIT set up

Special functions set up

Cruise control allows to set some special options..
SAVIR – safety feature. It switch cruise control OFF, if brake pedal and accelerator are pressed at the same time. It may cause unusual reactions of the cruise control, depending on the brake switch sensitivity.
SPL – speed limiter authorization
NSSG – acceptance of information about a vehicle gearbox is in neutral.

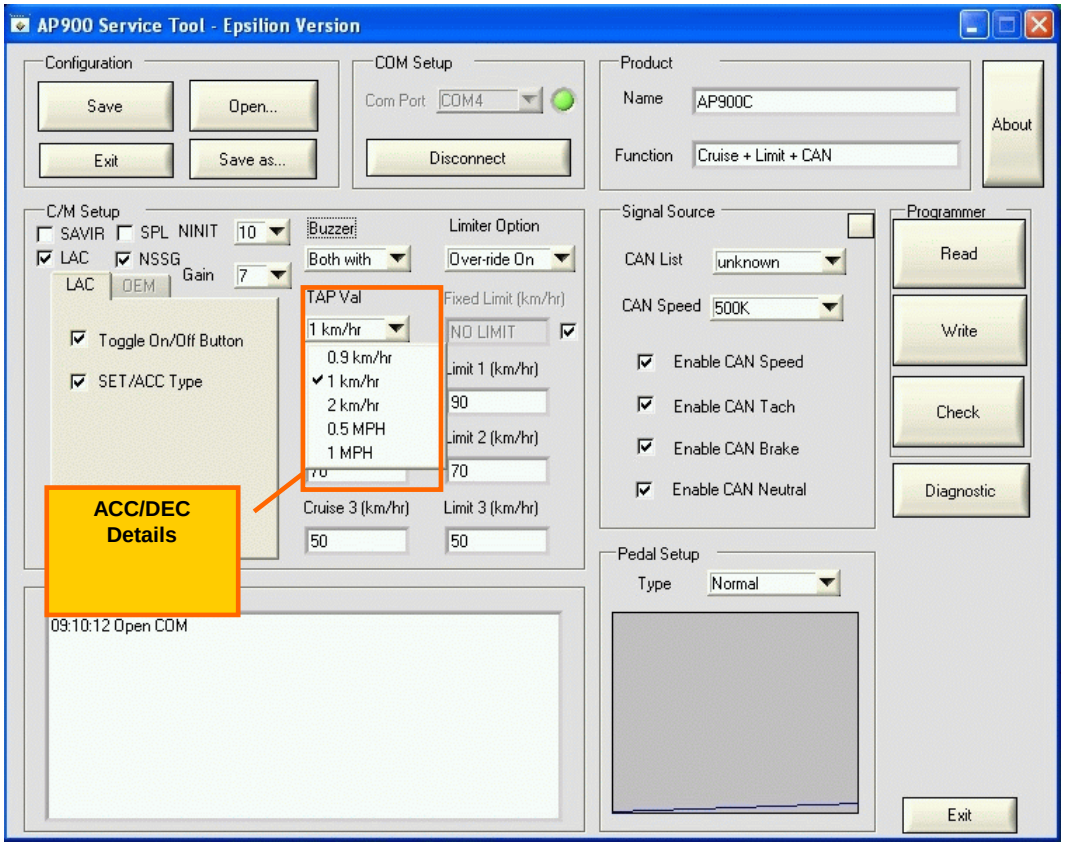
Sound alerts for cruise control conditions or warning notifies can be set in following cases:
Both with – in cruise mode and the speed limiter.
Cruise Only – only in cruise mode
Limit Only – only at a speed limiter
No Buzzer – without notice (cruise control and speed limiter will not make any sounds)



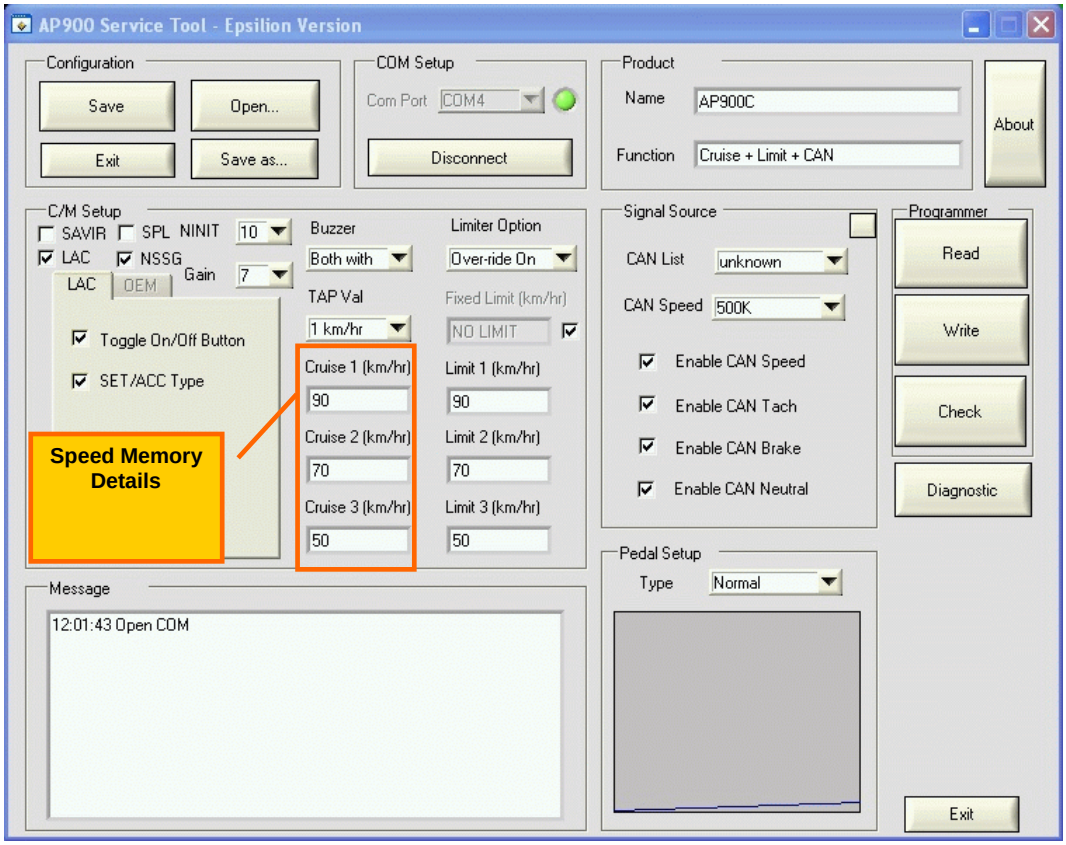
Picture 14. Special functions set up

Setting speed increasing value via control module

TAP Val determines an increase or decrease speed in short press ACC or DEC in cruse mode. Speed can be saved into cruise control memory and activated by pressing I or II (or III).



Picture 15. TAP Val set up



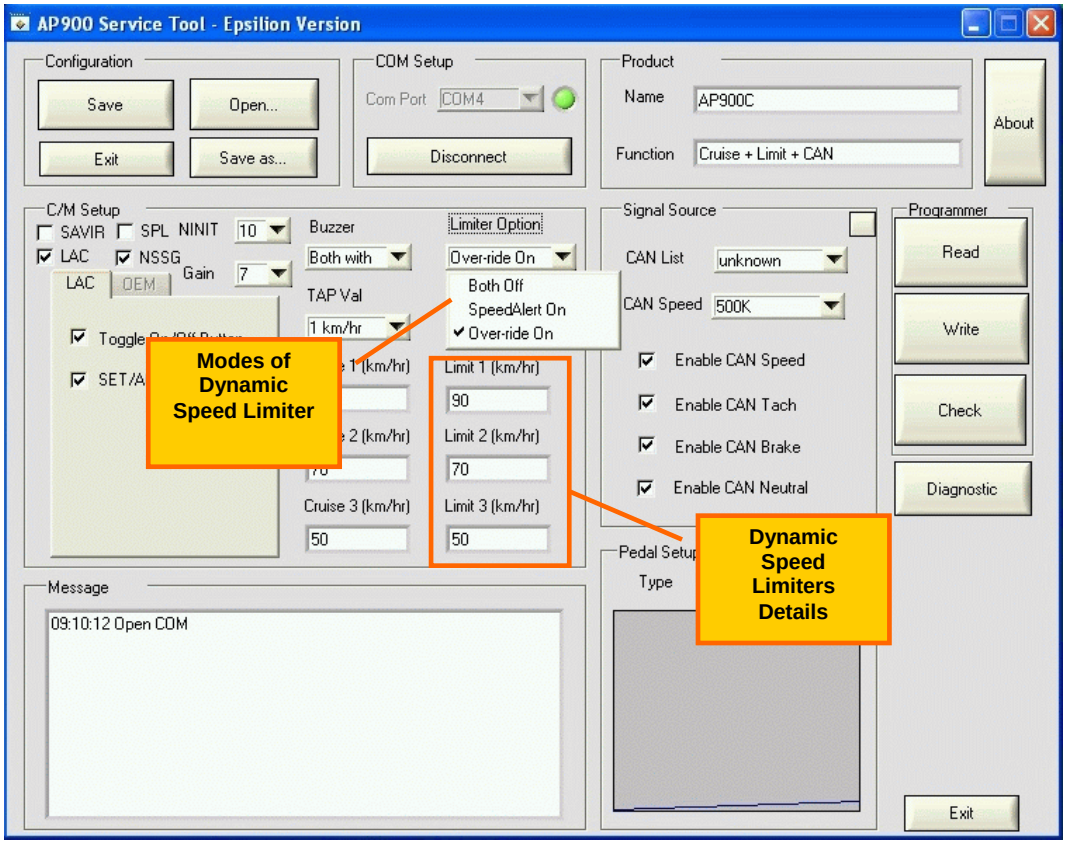
Picture 16. Cruise speeds set up

Set up values for dynamic speed limiter

If dynamic speed limiter is ON, parameters can be set up. See installer manual, chapter 6.2.7
Adjustment of the speed limiter allows you to choose the following values

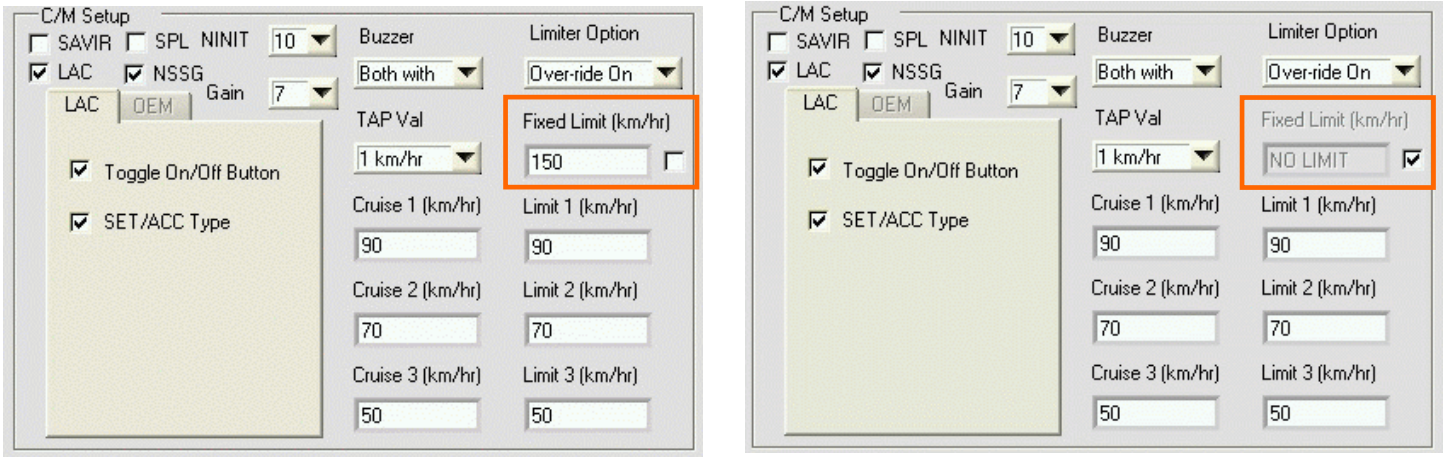
Both Off – speed alert feature and overspeed function is not possible
SpeedAlert On – warns when set up speed is overspeed.
Over-ride On – turns over-ride function ON..

Limit values for dynamic speed limiter can be set directly. Above this value, cruise control can not increase the speed.



Picture 17. Speed limiter set up

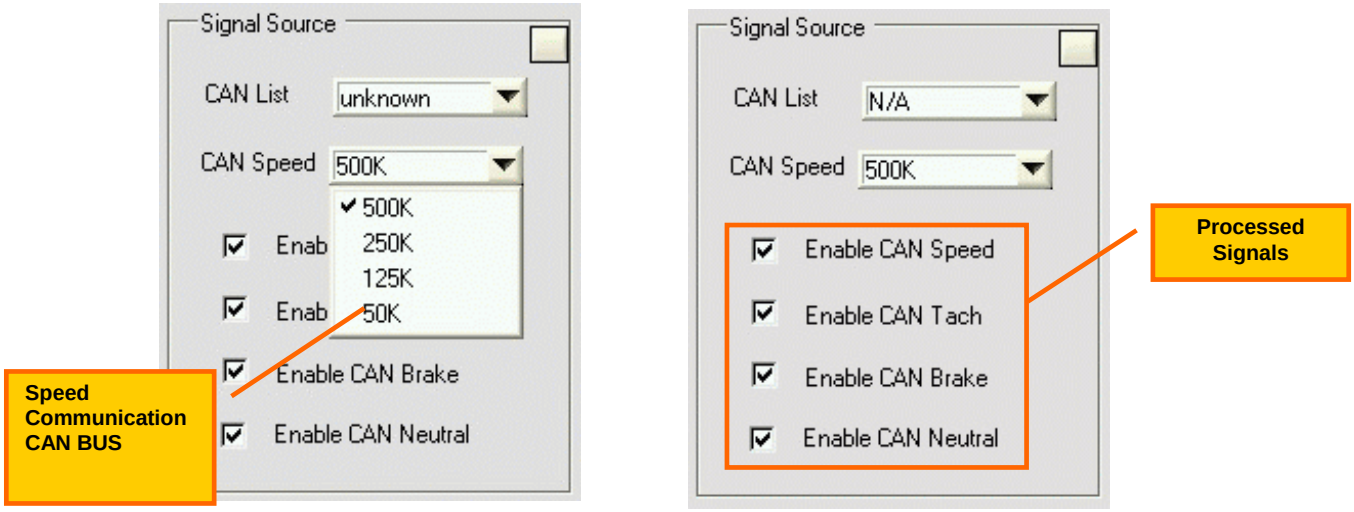
Setting the value of fixed limiter speed is possible in ***Fixed Limit***. Once the function will be ticked, fixed limiter will be out of work. If fixed limiter is activated, it is not possible to increase the set speed, even with cruise control OFF.



Picture 18. Speed set up for fixed limiter

CAN signal information

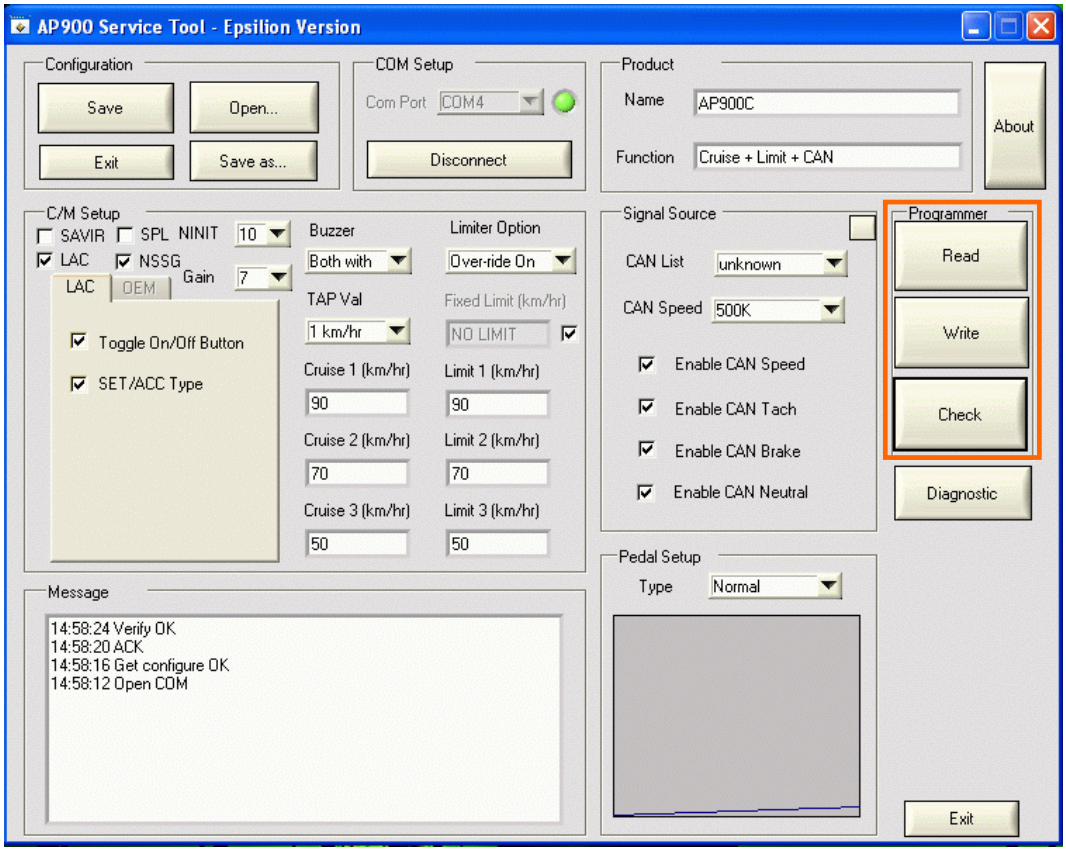
The program allows to display signals via CAN, which cruise control can handle. Speed with which the main unit communicate on CAN BUS can be set up. These values are automaticaly generated in CAN mode settings (see chapter 6.2. in installing manual), or are in default configuration files (see below).



Picture 19. Set up for CAN BUS

Reading and writing cruise control configuration

Settings and configuration needs to be moved into cruise control unit. (use button ***write***)
Values and the cruise control configuration is possible to read from main unit after button ***read*** is pressed. (visible values and fields in the program are updated).
Check button verificate configuration (preset values and visible fields in the program will not change).

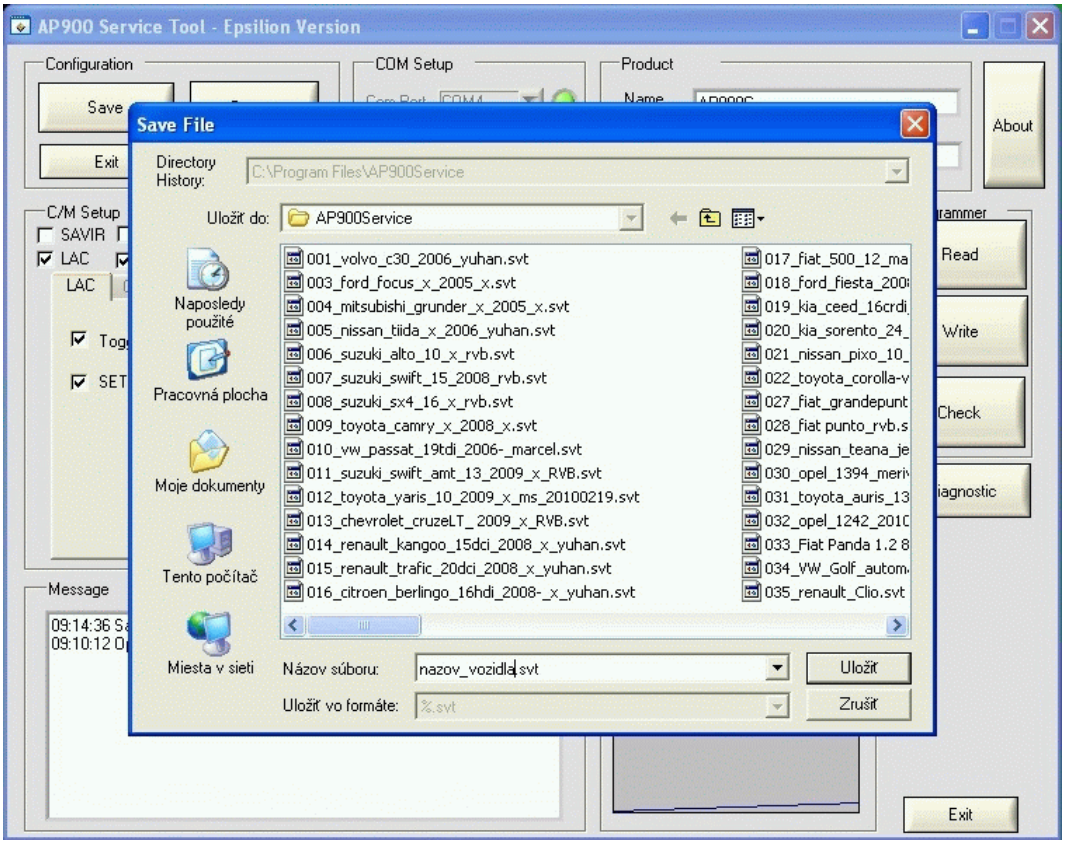


Picture 20. Configuration buttons

Saving and loading configuration from file

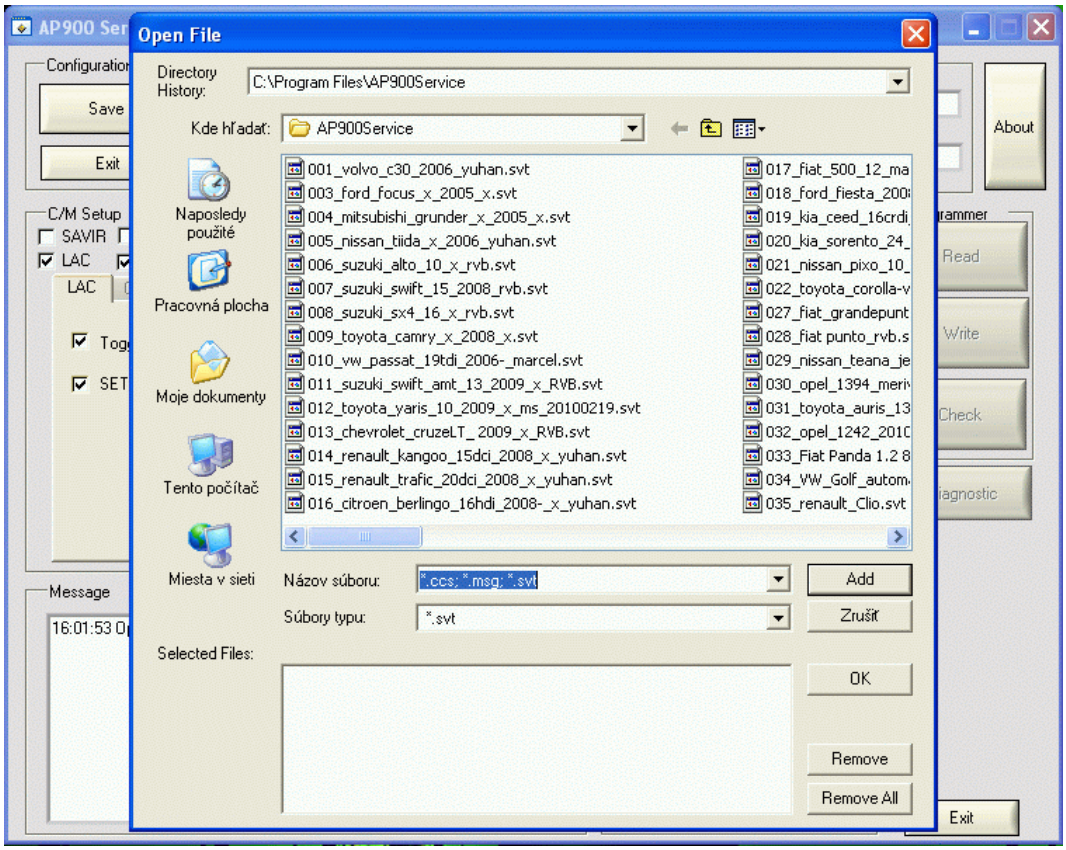
Program allows to save configuratin into file. It is recommended after successfully testing and set up, save the settings under the car's name and year of made. It can be used next time with the same car model, to save time.

To save configuration, use ***Save as...***
Window opens where you can choose to save the file way and file name. We recommnend to have originally set way for storage (also read) files. Press ***Save*** to save the selected file name.



Picture 21. Configuration save

To read configuration from file use button ***Open***.
Window opens with the way and saved files. Select file and confirm with **OK**.

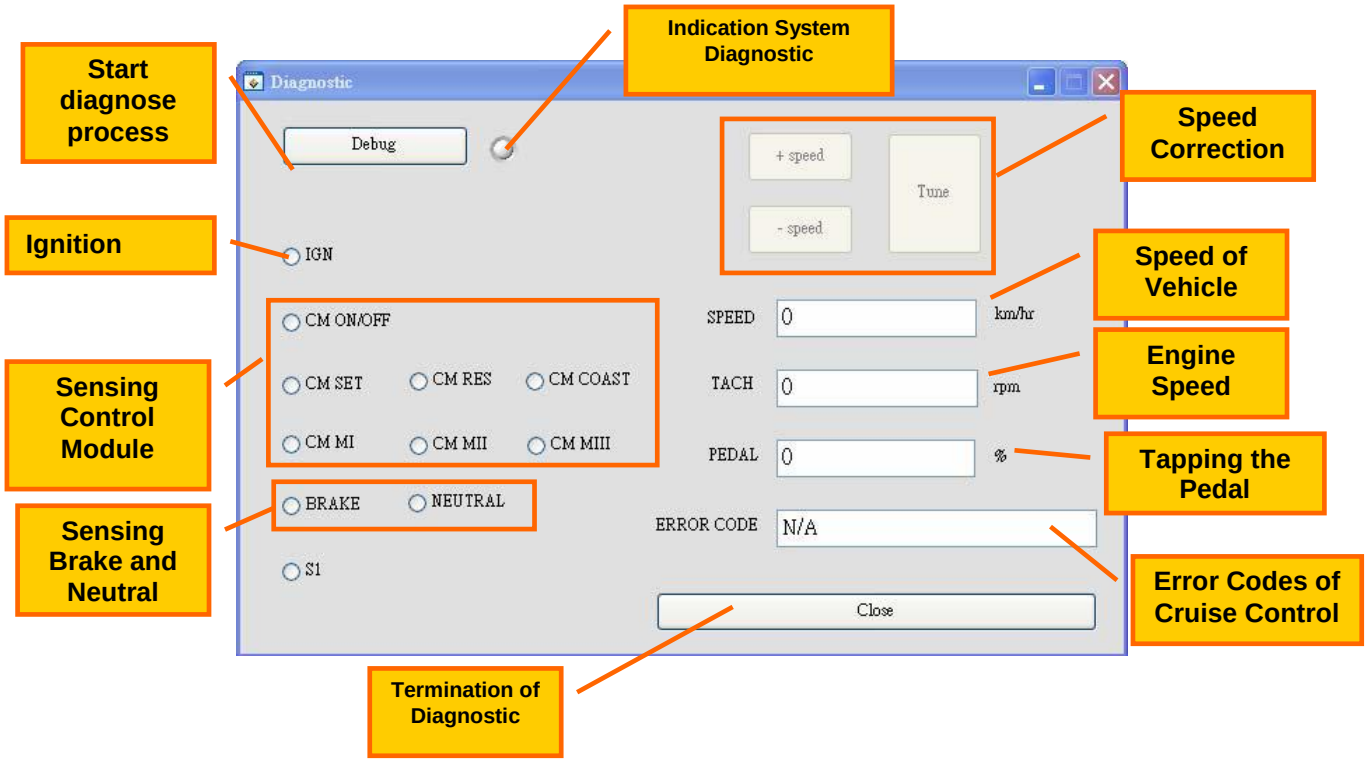


Picture 22. Reading configuration to service programe from file

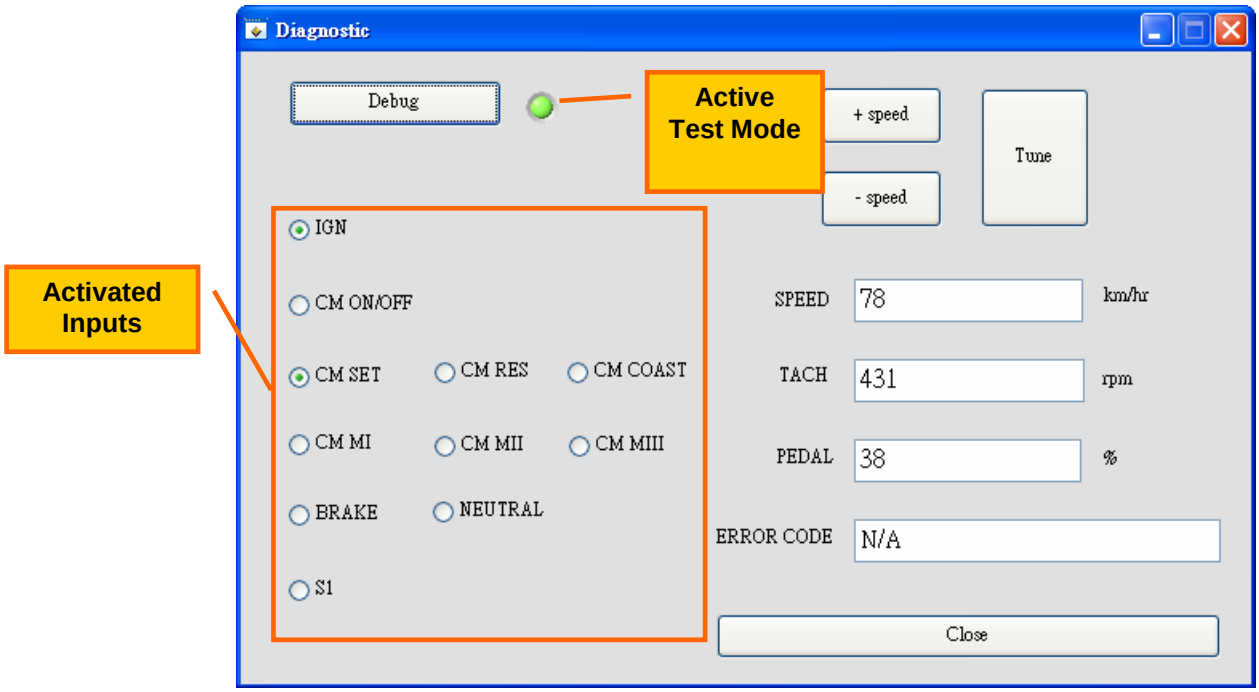
Diagnostic

Service programe allows to run cruise control diagnostic. Diagnostic can test:

- **ignition connection**
- **brake contact**
- **neutral contact**
- **mode button S1 on the back of cruise control unit**
- **contacts – functionality of the control module**
- **watch current sensed vehicle speed or corrected sensed speed with actual vehicle speed.**
- **monitor the accelerator position**
- **diagnose cruise control fault by fault code**

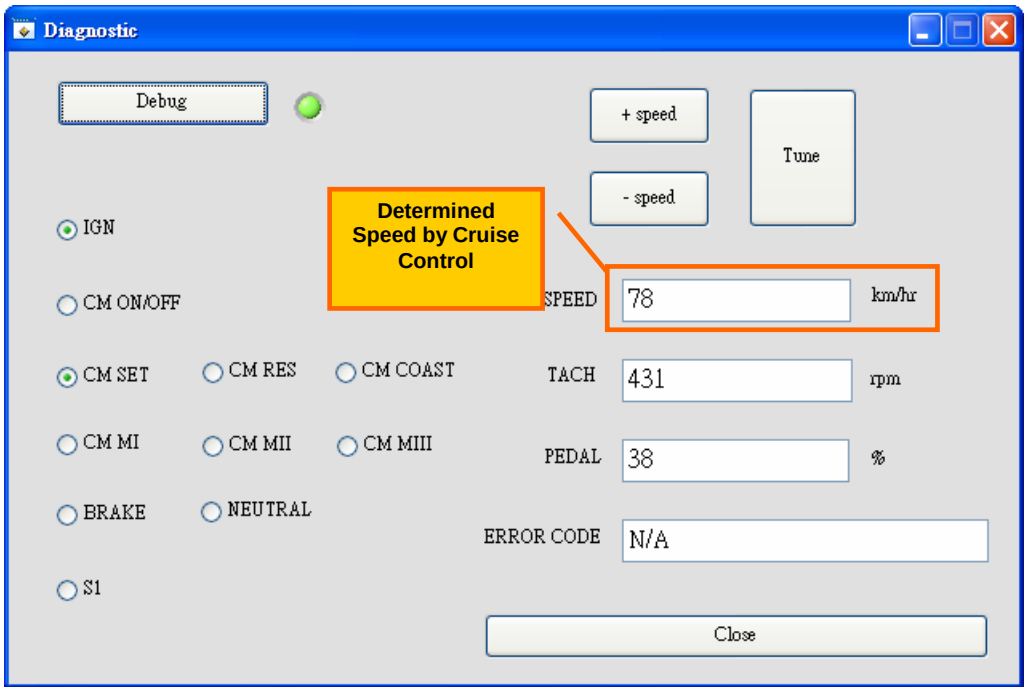


Debug connect to cruise control and cruise control goes into testing mode (ignition must be ON). Point next to the button lights up green.
It is possible to test all the switches and control module. Activated switch or position is indicated by green highlighted point next to the name input



Speed correction

If cruise control speed (via CAN or analog) does not match the real speed, correction can be made.



Buttons ***+ speed*** or ***–speed*** can adjust the speed to match the real speed.
To confirm the speed, press ***Tune***.

For writing into cruise control is necessary to finish test mode with ***Close*** button and write values into cruise control with ***Write*** button on main panel.

80 km/h will be set at 38% pedal use.